

CLAIMS

1. A filling apparatus (1) for a flexible pouch (100), for introducing a liquid into a flexible pouch (100) connected to a refilling infuser (110) having an air inlet (116), characterized in that the filling apparatus comprises:

5 an attaching means (10) for the flexible pouch (100) adapted to position upwards a distal end (113) of the filling infuser,

 a supporting means (20) for a supply container (200) containing the liquid (201) for introduction, said supporting means (20) being adapted for positioning said supply container (200) in a position in which the liquid (201) flows out by gravity when said supply container (200) is connected with the filling infuser
10 (110),

 an air compressing means (30),

 a connecting means (40) that connects the compressing means (30) and the air inlet (116) of the filling infuser (110).

2. The filling apparatus (1) according to claim 1, characterized in that the attaching means (10) are adapted to fit cooperatively together with a lower portion of the filling infuser (110).

3. The filling apparatus (1) according to either one of claims 1 or 2, characterized in that the attaching means (10) includes an attachment bore (11) having an approximately complimentary shape to a proximal part (112) of the filling infuser (110).

4. The filling apparatus (1) according to any one of claims 1 to 3, characterized in that the attaching means (10) includes a transverse vertical opening (12) extending between the attachment bore (11) and the exterior, the transverse vertical opening (12) being adapted to permit the passage of the filling infuser (110)
5 as it is put in place in the attaching bore (11) by insertion along an approximately horizontal direction.

5. The filling apparatus according to any one of claims 1 to 4 characterized in that the attaching means (10) includes a transverse horizontal slot (13) extending between the attachment bore (11) and the exterior, said transverse horizontal slot (13) being adapted to permit the passage of lateral support arms (118) 5 when the filling infuser (110) is put in place in the attaching bore (11) by insertion along a substantially horizontal direction.

6. The filling apparatus (1) according to any one of claims 1 to 5, characterized in that the supporting means (20) includes a supporting bore (21) of a shape approximately complimentary to the end of the supply container (200) fitting a cap (202).

7. The refilling apparatus (1) according to any one of claims 1 to 6, characterized in that the supporting bore (21) has a cylindrical shape.

8. The filling apparatus (1) according to any one of claims 1 to 7, characterized in that the supporting means (20) includes a transverse vertical slot (22) extending between the supporting bore (21) and the exterior, said transverse vertical slot (22) being adapted to permit the passage of the distal end (113) of the filling 5 infuser (110) when the filling infuser (110) is put in place in the attachment bore (11), by insertion along an approximately horizontal direction.

9. The filling apparatus (1) according to any one of claims 1 to 8, characterized in that the transverse vertical slot (22) and the transverse horizontal opening (12) are in direct communication with each other.

10. The filling apparatus (1) according to any one of claims 1 to 9, characterized in that the compressing means (30) includes a manually compressible squeeze bulb (33).

11. The filling apparatus (1) according to any one of claims 1 to 9, characterized in that the compressing means (30) includes a flexible bladder (31) compressible by a pivotal pedal (32).

12. The filling apparatus (1) according to any of claims 1 to 11, characterized in that the connecting means (30) includes a tube (41) connecting the compressing means (30) to a fitting (42) adapted to cooperatively fit together with the air inlet (116) of the filling infuser (110).

13. A filling system for flexible pouches (100), characterized in that it includes at least two filling apparatuses (1) according to any one of the preceding claims.